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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/091,654

03/05/2002

Liton Molla

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01/10/2006

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EXAMINER

NGUYEN, BINH QUOC

ART UNIT

PAPER NUMBER

2664

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/091,654	LITON MOLLA	
	<b>Examiner</b>	<b>Art Unit</b>	
	Binh Q. Nguyen	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-23 is/are allowed.
- 6) ☒ Claim(s) 1 and 4-15 is/are rejected.
- 7) ☐ Claim(s) 2-3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4-15 are rejected under 35 U.S.C. 102(e) as being anticipated by *Feher* the US Patent No: (US 6,757,334).

**Regarding claim 1;** *Feher* teaches a multifunctional base station comprising:

a transmit/receive switch (*see Fig. 1A, item 113*);

at least one RF processing module, the at least one RF processing module being coupled to the transmit/receive switch (*see Fig. 1A, item "RF HEAD"*);

an ultra high-speed transceiver, the ultra high-speed transceiver being coupled to the at least one RF processing module (*see col. 12, lines 58-66*);

a codec module, the codec module being coupled to the ultra high-speed transceiver (*see col. 35, lines 46-60*);

a signal processing module, the signal processing module being coupled to the codec (*see col. 13, lines 17--35*);

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a network interface, the network interface being coupled to the signal processing module (*see col. 12, lines 58-66, "interface unit (IU) 107 in FIG. 1a" means a network interface*);

wherein the transmit/receive switch receives an analog signal (*see col. 13, lines 7-16*) from an air interface of a wireless network (*see Fig. 1A, item 114 means an air interface of a wireless network*), the analog signal having a spectrum extending from a first frequency to a second frequency, the first frequency being lower than the second frequency (*see col. 17, line 26-to-col. 18, line 65*);

wherein an RF processing module has a band pass filter that passes the spectrum of the analog signal to the ultra high-speed transceiver (*see col. 17, line 26-to-col. 18, line 65, BPF means a band pass filter*);

wherein the ultra high-speed transceiver has at least one analog-to-digital converter for sampling the analog signal at least at twice the second frequency without the spectrum being shifted in frequency (*see col. 35, line 22-60, "A/D" means analog-to-digital converter*);

wherein the codec module adds at least one error code to the digital signal (*see col. 27, lines 3-31*); and

wherein the signal processing module passes the digital signal to the network interface (*see col. 35, line 46-to-col. 36, line 6*).

**Regarding claim 4; *Feher*** teaches the multifunctional base station of claim 1, wherein the at least one error code is selected from the group consisting of a Trellis code, an FEC code, and a CRC code (*see col. 16, lines 34-56*).

**Regarding claim 5; *Feher*** teaches the multifunctional base station of claim 1, wherein the signal processing module further suppresses a carrier wave of the analog signal and down samples the digital signal (*see col. 13, lines 25-42*).

**Regarding claim 6; *Feher*** teaches the multifunctional base station of claim 1, wherein the analog signal is a fixed wireless signal (*see col. 31, lines 26-35*).

**Regarding claim 7; *Feher*** teaches the multifunctional base station of claim 1, wherein the analog signal is a cellular signal (*see col. 7, lines 29- 36*).

**Regarding claim 8; *Feher*** teaches the multifunctional base station of claim 1, wherein the analog signal is a back haul signal (*see col. 7, lines 29- 51*).

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**Regarding claim 9; *Fehler* teaches a multifunctional base station comprising:**

a network interface (*see col. 12, lines 58-66, "interface unit (IU) 107 in FIG. 1a" means a network interface*);

a signal processing module, the signal processing module being coupled to the network interface (*see col. 13, lines 17--35*);

a codec module, the codec module being coupled to the network interface (*see col. 35, lines 46-60*);

an ultra high-speed transceiver having at least one digital-to-analog converter, the ultra high-speed transceiver being coupled to the codec module (*see col. 12, lines 58-66*);

at least one band pass filter, the at least one band pass filter being coupled to the ultra high-speed transceiver (*see col. 17, line 26-to-col. 18, line 65, BPF means a band pass filter*);

at least one up conversion module, the at least one up conversion module being coupled to the at least one band pass filter (*see col. 31, lines 36- 50, and col. 38, lines 6-16*);

at least one amplifier, the at least one amplifier being coupled to the at least one up conversion module (*see col. 11, line 25-47, Transmitter Amplifier (AMP)" means at least one amplifier*);

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a transmit/receive switch, the transmit/receive switch being coupled to the at least 15 one amplifier (*see Fig. 1A, item 113*);

wherein the network interface receives a digital signal from a digital network (*see Fig. 1A, item 102 means network interface, and voice data, video, CDMA mean from a digital signal from a digital network*) ;

wherein the signal processing module passes the digital signal to the codec module (*see col. 35, lines 46-60*);

wherein the codec module performs error detection on the digital signal (*see col. 36, lines 24-41*);

wherein the ultra high-speed transceiver passes the digital signal to one of the at least one digital-to-analog converter, the digital signal being passed to the at least one analog-to-digital converter based on a pattern of bits in the digital signal that identifies an analog transmission protocol for an analog signal to be transmitted by the multifunctional base station (*see col. 30, lines 7-43*);

wherein the at least one digital-to-analog converter of the ultra high-speed transceiver converts the digital signal to the analog signal (*see col. 30, lines 7-43*);

wherein the at least one band pass filter module has at least one band pass filter for passing the analog signal (*see col. 17, line 26-to-col. 18, line 65, BPF means a band pass filter*);

wherein the up conversion module shifts a spectrum of the analog signal passed

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by the at least one band pass filter, the spectrum being shifted to a carrier frequency  
(*see col. 13, lines 25-42*),

wherein the at least one amplifier amplifies the analog signal and modulates a  
carrier wave onto the analog signal (*see col. 13, lines 25-42*); and

wherein the transmit/receive switch outputs the analog signal at an antenna (*see  
col. 13, lines 25-47*).

**Regarding claim 10; *Feher*** teaches the multifunctional base station of claim 9,  
wherein the at least one error code is selected from the group consisting of a Trellis code,  
FEC code, and a CRC code (*see col. 16, lines 34-56*).

**Regarding claim 11; *Feher*** teaches the multifunctional base station of claim 9,  
wherein the analog transmission protocol selected from the group consisting of CDMA,  
IS-95, IS-2000, QAM, and QPSK (*see col. 35, lines 22-60*).

**Regarding claim 12; *Feher*** teaches the multifunctional base station of claim 9,  
wherein the analog signal is a fixed wireless signal (*see col. 31, lines 26-35*).

**Regarding claim 13; *Feher*** teaches the multifunctional base station of claim 9,  
wherein the analog signal is a cellular signal (*see col. 7, lines 29- 36*).

**Regarding claim 14; *Feher*** teaches the multifunctional base station  
of claim 9, wherein the analog signal is a back haul signal (*see col. 7,*

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*lines 29- 51).*

**Regarding claim 15; *Feher*** teaches the multifunctional base station of claim 9, wherein the signal processing module adds the pattern of bits in the digital signal to identify the analog transmission protocol (*see col. 17, line 26-to-col. 18, line 65*).

### ***Allowable Subject Matter***

3. **Claims 2-3** are objected to as being dependent upon a rejected base claim, but would be allowable if rewrite in independent form including all of the limitation of the base claim and any intervening claims.

4. **Claims 16-23** are allowable.

### ***Contact Information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh Q. Nguyen whose telephone number is 571-272-8563. The examiner can normally be reached on M-F: 9:00 AM - 5:30 PM.

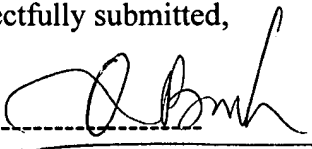
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

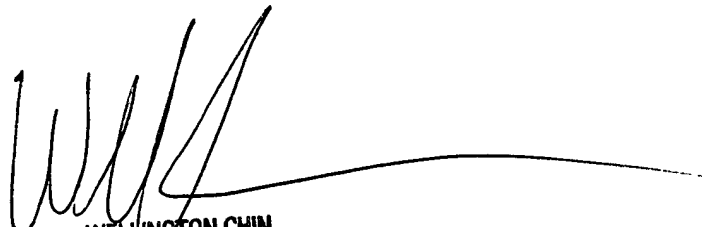
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

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applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

By:   
Binh Q. Nguyen  
Patent Examiner  
01/04/2006

  
WELLINGTON CHIN  
SENIOR PATENT EXAMINER